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PRC

October 10, 1991

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Mr. Kenneth Lucas
U.S. EPA Region IV
345 Courtland Street, NE
Atlanta, Georgia 30365

RE: TES VIII Work Assignment No. C04054
Olin Chemical, McIntosh Alabama
Meeting Summary Letter Report

Dear Mr. Lucas:

PRC Environmental Managment, Inc. (PRC) is providing you with a letter report summarizing a meeting held at the U.S. Environmental Protection Agency (EPA) Region IV office on Monday, October 7, 1991, 10:00 am. The purpose of the meeting was to discuss the Revised Sampling and Analysis for Macroinvertebrates and Fish (SAP), and the Fish Sampling Analytical Techniques. Both documents were prepared by Woodward Clyde Consultants as contractor to Olin Chemical Corporation. The meeting participants included:

Kenneth A. Lucas, EPA Remedial Project Manager
Joan Dupont, EPA Groundwater Support Unit
Lynn H. Wellman, EPA Risk Assessment Division
Joan Benante, EPA Resource Conservation and Recovery Act (RCRA) Division
Charles King, EPA Remedial Project Manager, Ciba-Geigy Site
Julie Keller, ManTech
Rachel Cochran, PRC, Inc.
Jim Brown, Olin Corporation
Toni Odom, Olin Corporation
W. J. Derocher, Olin Corporation
William Beal, Woodward Clyde Consultants
Douglas Hahn, Woodward Clyde Consultants
Charlie Westerman, Woodward Clyde Consultants
Pete Douglas, U.S. Fish and Wildlife Service
Waynon Johnson, National Oceanic and Atmospheric Administration (NOAA)
John Lindsay, NOAA

Olin representatives stated that their purpose for attending the meeting was to discuss the two sampling and analysis documents and to obtain EPA's approval to begin biological sampling in Operable Unit 2 (OU-2) before the basin on the Olin property reaches flood stage. Olin requested an agreement with EPA to make any reasonable modifications to the revised SAP so that a date could be established to begin biological sampling activities.

Available Woodward Clyde sediment sampling data collected from the basin area was distributed to meeting attendees by Mr. William Beal. Mr. Beal stated that the analytical data had not yet undergone validation. The analytical results were the basis for organic parameter selection in fish samples. No inorganic data was available at the time of the meeting although Woodward Clyde stated that mercury would be the only inorganic constituent to be analyzed for in fish. Mr. Beal stated that largemouth bass and bullhead were the two preferable species for

fish sampling due to their bottom-dwelling nature. However, the number of bullheads observed during the preliminary reconnaissance was minimal. Therfore, if an insufficient number of bullheads were collected, the more migratory channel catfish would be substituted for the bullheads.

Based on sediment data, three volatile organic compounds are to be omitted in fish tissue analysis. These compounds are acetone, carbon disulfide, and methylene chloride due to their presence in laboratory blank samples. One semivolatile compound, bis (2-ethylhexyl) phthalate, is to be ommited because it is also a common laboratory and field contaminant. Some discussion was raised due to the high concentration of bis (2-ethylhexyl) phthalate (37,000 µg/kg) detected in sediment. Mr. Pete Douglas representing U.S. Fish and Wildlife felt that the compound may be a valid site contaminant. The pesticides to be omitted are delta BHC and endosulfan I due to the relatively low levels detected in sediments. Olin representatives stated that pesticides were not handled at the McIntosh plant; however, due to the high concentrations observed in basin sediments, DDD, DDE, and DDT would be analyzed in fish samples.

According to Woodward Clyde and Olin representatives, mercury will be the only inorganic constituent analyzed for in fish samples. Olin stated that two forms of mercury were handled at the McIntosh plant: elemental mercury and ionized mercury. Olin claimed that it is possible that other outside mercury sources are located nearby the Olin plant. Through sampling efforts, Olin is attempting to define the extent of mercury contamination in the wastewater ditch that leads to the basin. Fish samples will be analyzed for total mercury because specific forms of mercury cannot be detected with the current laboratory procedures.

The meeting reconvened after the lunch break at 1:00 pm, and Mr. Pete Douglas was asked to comment on the revised SAP. Mr. Douglas made the following comments and recommendations:

1. There is a great deal of biological fluctuation in macroinvertebrates in the basin area. It is difficult to determine man's impact from nature's.

2. No control station was mentioned in the revised SAP. In order to determine the impact on macroinvertebrates in the basin, an area comparable in nature to the basin area and having no industrial impact is necessary.

3. The U.S. Fish and Wildlife Service is concerned with trust resources, including wetlands, endangered species, migratory birds, and water fowl. More areas of the food chain, such as amphibians, should be studied for hazardous constituents which could be deterimental to wildlife in the area.

4. The revised SAP stated that cheese would be used to bait the hoopnets for the collection of channel catfish. It was recommended that the cheese be analyzed for the same compounds that will be analyzed in the fish tissue so that no foreign constituents from the cheese will be detected in fish tissue.

5. Both the left and right fillets should be analyzed, as well as the carcass, due to the fluctuation of mercury concentrations as determined from past studies conducted by U.S. Fish and Wildlife. Individual fish analysis as opposed to composite samples was recommended.

6. From past research, contaminant levels in sediment can be lower than levels detected in biota samples. It was recommended that chemical analysis of the macroinvertebrates be conducted to determine actual contaminant levels in food chain organisms.

7. A variety of fish sizes should be collected for analysis so that small fish, which are most commonly ingested by birds will also be examined. Past research indicates that the larger the fish the higher the contaminant levels.

8. Sampling of fish in the Tombigbee River was strongly recommended to provide an accurate determination of the compounds originating from the Olin plant and the impacts on fish in the Tombigbee River.

Mr. Waynon Johnson, NOAA, made the following comments and suggestions regarding the revised SAP:

1. Lipid sampling of fish tissue should also be conducted for those lipophilic compounds known to bioaccumulate.

2. Five invertebrate grab samples as oppposed to three should be collected and processed independently.

3. A smaller seive mesh size should be used in the laboratory to rescreen the macroinvertebrate samples.

4. Some additional sediment sampling should be collected along with the macroinvertebrate samples.

The following comments and suggestions were made by members of the EPA Risk Assessment Division:

1. A full inorganic scan should be conducted on fish samples. The metals data for sediment sampling should be reviewed before limiting inorganic analysis of fish to mercury.

2. Fish samples should include 50 percent whole-body. Fish sampling data should include aging using scales or spines.

3. Field parameters including temperature, conductivity, and pH should be included in the macroinvertebrate study.

4. A quality assurance/quality control (QA/QC) procedure should be included in the revised SAP for the macroinvertebrate study.

5. The type of surface on which fish samples will be fillet should be stated. A clean piece of visquene should be used for each fish sample. Also, the decontamination procedures for fish sampling equipment should be stated.

Olin and Woodward Clyde representatives stated that the above comments and recommendations would be reviewed and considered. Formal written comments are to be submitted to Olin by the various organizations. Mr. Ken Lucas stated that he would like sampling to begin by the end of October. Based on analytical data from the biological sampling,

additional sampling may be required in a phase two approach. Mr. Lucas adjorned the meeting at approximately 4:30 pm.

PRC recently conducted a technical review of the revised SAP; however, PRC was informed by EPA that a formal technical review of the Fish Sampling and Analytical Techniques document would not be required. Qualified PRC staff are now informally reviewing the document so that any major problems or issues can be identified. I will notify you of any potential problems regarding this document. If there are any questions or comments regarding this letter summary report, please contact me at (404) 522-2867.

Sincerely,

PRC Environmental Management, Inc.

Rachel S. Cochran

Rachel S. Cochran
Assistant Biologist

cc: Mike Jones, PRC-Atlanta
Jack Sulima, Dynamac Corporation